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Data base management for World Trade: Indian and Global perspectives

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Introduction

Globalization is an unavoidable fact. It has been going on since the beginning of time, and as the cost of trade falls, international trade will only increase. Countries that have been successful at developing have often relied on international trade as the engine for their growth. Trade is also a measure of health of the Global Economy. International trade forms an important part of the world economy and, as such, must be measured reliably and the relevant statistical data should be comparable and widely disseminated. International trade statistics are an important primary source for most public- and private-sector decision-makers. The Trade database empowers organizations to leverage invaluable global trade information to strengthen and grow their business. Access to comprehensive import and export statistics will enable companies to make more informed decisions, leading to more successful results. Availability of timely and high quality trade statistics becomes a precondition for an in-depth analysis of the production, consumption, employment, income and overall welfare both at the country and global level.

Trade statistics are compiled to serve the needs of many users, including governments, business community, compilers of other economic statistics such as balance of payments and national accounts, various regional, supranational and international organizations, researchers and the public at large. Different users need different data, ranging from data sets of varying detail by country and commodity to aggregated figures. The uses include development of national, regional and international trade policy, including policies on sustainable development, fiscal, monetary, structural and sectorial matters as well as addressing issues of environmental and health concerns.

The global trade database will bring vital information to organizations that fulfill a role in the international transportation/supply of goods. Access to this information will directly impact the quality of your operational and marketing decisions. Together with other market databases, the trade database provides detailed information on the behavior and trends of markets. Data can be extrapolated from the database and used for forecasting purposes. These forecasts will allow you to be better prepared to react to emerging trends in the marketplace.

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National trade database is essentially to pool up the extent of ongoing trade and envisage the future trade based on the demand-supply existing in domestic as well as international markets. The vision and planned budgets of the nation at large is based on the national databases generated over a period of time. The infrastructure required, provisions for subsidy, policy decisions and human resource development are decided based on national databases.

Local trade databases are indicators of ground truth reality and are dynamic in nature. They provide the real field data which basically support the domestic markets and global suppliers who intend to purchase from domestic markets.

Global trade databases

1) Trade Codes

In international trade, codes are used to identify, classify, and record data for every product. Though there are many international trade coding systems, the Harmonized Commodity Description and Coding System (otherwise known as the Harmonized System, HS, or HTS) is generally the most applicable and available for fish/seafood trade. While other coding systems such as the Standard International Trade Classification (SITC) and the Standard Industrial Classification (SIC) are available, they are all derivatives of HS, which stands as the core classification for goods internationally (Wang, 1999). For this reason, it is generally best to use the Harmonized System for fisheries data collection.

The Harmonized System (HS) is maintained by the World Customs Organization. Approximately 170 countries use HS worldwide for customs tariffs and trade statistics. This accounts for about 98 per cent of world trade. The UN Statistical Commission has adopted HS and all of the UN's own classification systems correlate with HS. The classification consists of 21 Sections, each containing a varying amount of chapters. For the purpose of fisheries trade, Section I, Chapter 3 (which consists of fish and crustaceans, molluscs and other aquatic invertebrates) is the applicable Section and Chapter (World Customs Organisation, 2007).

An illustration is given for reading a trade code with the example of a 6 digit HS code: 030378

The first two numbers signify the chapter. In this case, it is Chapter 3, which covers 'fish and crustaceans, molluscs and other aquatic invertebrates.

The second two numbers are the heading under that chapter. In this case '03' signifies 'Fish, frozen, excluding fish fillets and other fish meat of heading 0304'. The last two numbers are a subheading which generally identifies a species of fish or parts of a fish and whether they are live, frozen, chilled, or in some way preserved.

In many cases, these codes can go beyond the six digits in the example above. Eight and ten digit codes exist as well. However, the treaty which sets out the guidelines for use of the HS system specifies that only the first six digits will be internationally standardized (World Customs Organisation, 1983). This means that each country is able to use the last four digits to create subheadings as required (Table 2), or even not use them at all. It is important to remember this when comparing export data from one country with import data from another country, as the same eight or ten digit code may not refer to the exact same product.

Table 37.1: HS Codes Sub-Heading used in international fish trade

Code	Description
0301	Harmonised Codes of Live fish
0302	Harmonised Codes of Fish, fresh or chilled, excluding fish fillets and other fish meat of heading 0304, salmonidae, excl
0303	Harmonised Codes of Fish, frozen, excluding fish fillets and other fish meat of heading no.0304, pacific salmon (oncorhy
0304	Harmonised Codes of Fish fillets and other fish meat (whether or not minced), fresh, chilled or frozen
0305	Harmonised Codes of Fish, dried, salted or in brine; smoked fish, whether or not cooked before or during the smoking pro
0306	Harmonised Codes of Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine; crust
0307	Harmonised Codes of Molluscs, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine; aquatic

(2)Food and Agriculture Organization of the United Nations- Fisheries and Aquaculture Department

The FAO Fisheries and Aquaculture Department provides advice and objective information to Members to help promote responsible aquaculture and fisheries. To fulfil this role, the Department compiles, analyses and disseminates fishery data, structured within data collections.

Fishery Statistical Collections: Fishery Commodities and Trade

This database contains statistics on the annual production of fishery commodities and imports and exports (including re-exports) of fishery commodities by country and commodities in terms of volume and value from 1976. Online queries are available and you can select items of interest from the selection tabs and choose the entries to show from the Display tab.

You have the option to select the country, trade flow(export, import, production and reexport), commodity, time, display options and tracker facilities available in the online database query. In the commodity menu you can have trade Crustaceans Fish Fish, crustaceans, molluscs and other aquatic invertebrates Molluscs, aquatic invertebrates.

2) WTO statistics database

**(**http://stat.wto.org/StatisticalProgram/WSDBStatProgramHome.aspx?Language=E)

WTO statistics database allows you to retrieve statistical information. The Trade Profiles provide predefined information leaflets on the trade situation of members, observers and other selected economies;

- The Tariff Profiles provide information on the market access situation of members, observers and other selected economies;

- The Services Profiles provide detailed statistics on key infrastructure services (transportation, telecommunications, finance and insurance) for selected economies;

- The Time Series section allows an interactive data retrieval of international trade statistics.

This site provides a searchable database on international trade in merchandise and
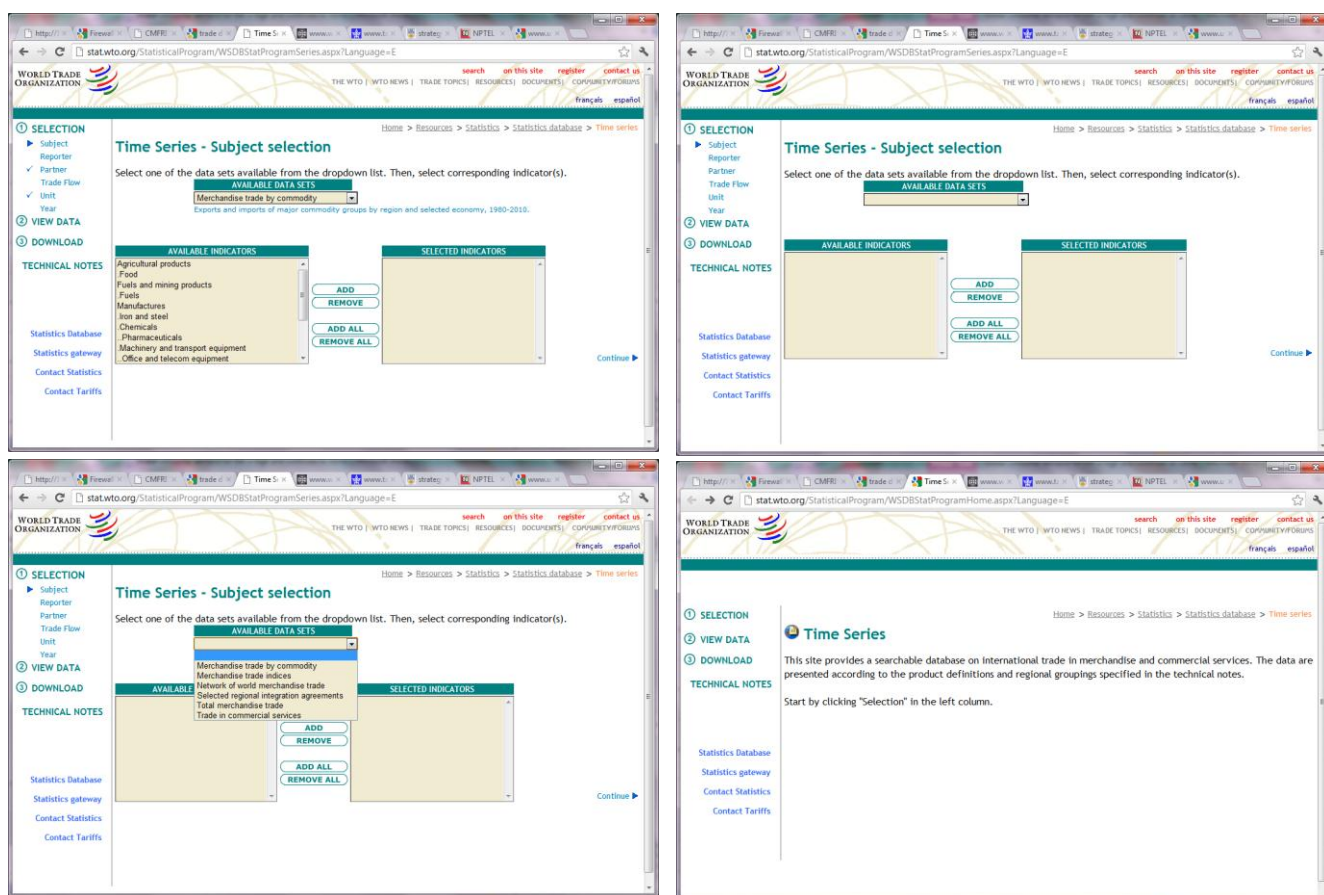
commercial services. The data are presented according to the product definitions and regional groupings specified in the technical notes. Start by clicking "Selection" in the left column. Select one of the data sets available from the dropdown list. Then, select corresponding indicator(s) (Fig.1)

Fig 37.1: Screen prints explaining time series interactive data retrieval from WTO statistics data base

3) UN Comtrade

The United Nations Commodity Trade Statistics Database (UN Comtrade) contains detailed imports and exports statistics reported by statistical authorities of close to 200 countries or areas. It concerns annual trade data from 1962 to the most recent year. UN Comtrade is considered the most comprehensive trade database available with more than 1 billion records. A typical record is – for instance – the exports of cars from Germany to the United States in 2004 in terms of value (US dollars), weight and supplementary quantity (number of cars). The database is continuously updated. Whenever trade data are received from the

national authorities, they are standardized by the UN Statistics Division and then added to UN Comtrade.

Limitations:

UN Comtrade is available to the general public and should be used with good knowledge of its limitations. Please read the following points very carefully before extracting and using data:

1. The values of the reported detailed commodity data do not necessarily sum up to the total trade value for a given country dataset. Due to confidentiality, countries may not report some of its detailed trade. This trade will - however - be included at the higher commodity level and in the total trade value. For instance, trade data not reported for a specific 6-digit HS code will be included in the total trade and may be included in the 2-digit HS chapter. Similar situations could occur for other commodity classifications. Detailed data processed after 1. January 2006 and published in HS will sum up to the respective totals due to the introduction of adjustment items with commodity code 9999 and 999999.

2. Countries (or areas) do not necessarily report their trade statistics for each and every year. This means that aggregations of data into groups of countries may involve countries with no reported data for a specific year. UN Comtrade does not contain estimates for missing data. Therefore, trade of a country group could be understated due to unavailability of some country data.

3. Data are made available in several commodity classifications, but not all countries necessarily report in the most recent commodity classification. Again, UN Comtrade does not contain estimates for data of countries which do not report in the most recent classification.

4. When data are converted from a more recent to an older classification it may occur that some of the converted commodity codes contain more (or less) products than what is implied by the official commodity heading. No adjustments are made for these cases.

5. Imports reported by one country do not coincide with exports reported by its trading partner. Differences are due to various factors including valuation (imports CIF, exports FOB), differences in inclusions/ exclusions of particular commodities, timing etc. The recommendations for international merchandise trade statistics can be found in the International Merchandise Trade Statistics: Compilers Manual). Additional methodological information can be found on the same web page.

6. Almost all countries report as partner country for imports the country of origin (see Metadata & References > Explanatory Notes) which is determined by the rules of origin established by each country (see International Merchandise Trade Statistics, Concepts and Definitions, Rev.2, para. 139 and 140). Hence, the term 'partner country' in the case of imports does not necessarily imply any direct trading relationship.

The International Trade Databases can be combined with the other databases to provide a comprehensive understanding of the impact of international trade on economic and financial markets. One important use of international trade statistics in the majority of countries is to provide a data source for the estimation of those components of the balance of payments and the national accounts which relate to trade in goods.

4) World Integrated Trade Solution

World integrated Trade Solutions (WITS) gives access to international trade and protection related data and offers built-in analytical tools allowing users to assess the impact of tariff changes. WITS provide users with capabilities to retrieve and analyze trade and tariff data; convert data between different nomenclatures; customize country and

product groups; and download data. WITS also includes simulation tool to calculate the impact of tariff changes on trade flows (trade creation and diversion), tariff revenues, and consumer welfare using partial equilibrium modeling tools.

5) United Nations Conference on Trade and Development (UNCTAD) – Trade analysis branch

The Trade Analysis Branch (TAB) of the Division on International Trade in Goods and Services, and Commodities undertakes policy-oriented analytical work aimed at improving the understanding of relevant and emerging issues in international trade. It also focuses on policy issues of particular importance for developing countries. The work program responds to priority areas as identified by member States and follows the guidelines of the Accra Accord which has reinstated the importance of economic analysis and statistical tools for improving trade policy decision-making in developing countries. The Trade Analysis Branch consists of three sections: Global and Regional Trade Policy Analysis, Trade Policy Research, and Trade Information; and one unit: Creative Industries.

6) Asia Pacific Research and Training network on Trade

The Asia-Pacific Research and Training Network on Trade (ARTNeT) is an open regional network composed of leading trade research institutions across the UNESCAP region which is supported by the International Development Research Centre (IDRC), Canada.

International Fisheries Organizations vis-à-vis trade

There are various fisheries organizations with databases relevant to international fisheries resources having relevance to trade. Few are compiled with their relevance in Table 1 given below:

Table 37.2 Various organizations maintaining databases with relevance to international fish resources, conservation and sustainable usage

Organization	Web address
Conservation of Arctic Flora and Fauna(CAFF)	http://www.grida.no/prog/polar/caff
Convention on the Conservation of Antarctic Marine Living Resources(CCAMLR)	http://www.ccamlr.org/
Commission for the Conservation of Southern Bluefin Tuna(CCSBT)	http://www.ccsbt.org/
Food and Agriculture Organization of the United Nations(FAO)	http://www.fao.org/
Inter-American Tropical Tuna Commission(IATTC)	http://www.iattc.org/
International Commission for the Conservation of Atlantic Tunas(ICCAT)	http://www.iccat.int/
International Council for the Exploration of the Seas(ICES)	http://www.ices.dk/

Indian Ocean Tuna Commission(IOTC)	http://www.iotc.org/English/index.php
International Pacific Halibut Commission(IPHC)	http://www.iphc.washington.edu/
International Whaling Commission(IWC)	http://www.iwcoffice.org/
Northwest Atlantic Fisheries Organization(NAFO)	http://www.nafo.int/
North Atlantic Salmon Conservation Organization(NASCO)	http://www.nasco.int/
North-East Atlantic Fisheries Commission(NEAFC)	http://www.neafc.org/
North Pacific Anadromous Fish Commission(NPAFC)	http://www.npafc.org/
North Pacific Marine Science Organization (PICES)	http://www.pices.int/
Secretariat of the Pacific Community(SPC)	http://www.spc.int/
Western and Central Pacific Fisheries Commission (WCPFC)	http://www.wcpfc.int/

National trade databases

1) **Export Import Trade Intelligence (**InfodriveIndia.com)

The theme database nationally on export import trade intelligence is illustrated with the example of Infodrive India, which is a 15 year old market leader in providing Competitive Business Intelligence on Exports Imports. Website evolved itself as a company with a unique blend of knowledge of practical requirements of Exporters Importers, an International Network of Trade data sources and high end IT technologies to deliver Export Import Business Intelligence Information in most user friendly & cost effective manner.

The information provided includes:

- Online India Export Import Data
- Online Exim Policy Portal
- Custom Duty in Export Import Data
- Export Import Trade Intelligence of 12 countries

2) **Indiastat.com**

It provides depth of India specific, socio-economic statistical facts and figures culled from various secondary sources it is a portal of state specific sites which provide statistical data for all the major socio-economic parameters of the Indian States. District level data where ever available can also be viewed. Through this exhaustive compiled data can be accessed and download in MS-Excel/HTML formats. The database creates substantial value through the following benefits:

- Support decision-making processes:
- Enhance Forecasting:
- More Effective Sales Approaches:

- Calculate Market Share:
- Identify New Business Potential:
- Analytical Tools
- Reliable Data:Access to this information will directly impact the quality of your operational and marketing decisions. Together with other market databases, the trade database provides detailed information on the behavior and trends of markets.
- Enhance Forecasting: Data can be extrapolated from the database and used for forecasting purposes. These forecasts will allow you to be better prepared to react to emerging trends in the marketplace.
- More Effective Sales Approaches: Providing business intelligence tools to your sales staff is an essential element of creating strategic sales opportunities. The trade database will give your sales staff the vital information they need. Furthermore, it can easily be made available to all your sales and marketing staff worldwide.
- Identify New Business Potential: Enables you to analyze commodities and value density to understand the attractiveness of new traffic flows.
- Calculate Market Share: Comparing the aggregate market volume with your current business will provide a good measure of your market share and will likely identify opportunities for new business growth.
- Analytical Tools: Enables analysis of the air cargo market on specific origin and destination routes, enabling users to identify air cargo potential that is currently transported by surface. Trends can be studied and used as the basis for forecasting the future market and commodity developments.
- Reliable Data: The data received from customs offices is put through rigorous validity testing to ensure subscribers are provided the most accurate information possible.
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3) **Ministry of Commerce and Industries Web base (**http://commerce.nic.in/index.asp)

Bilateral agreements are crucial in determining the tariffs as the trade relations differ from country to country. There are comprehensive Economic Partnership agreements (CEPA) that India is having with different countries. So Ministry of Commerce website will give the agreement details which provide us the approximate export-import tariffs for products intended in a trade.

4) **Marine Products Export Development Authority (**http://www.mpeda.com/inner_home.asp?pg=fishery**)**

The various schemes, directory of exporters, EU approved plants and export performance related to the marine products export is available in this web based database which included the list of culture based, resource based and product based catalogues.

Local trade databases

1) **Fish watch (**http://cmfri.org.in/fishwatch.html)

The Central Marine Fisheries Research Institute has been conducting fishery survey along the Indian coast and estimating marine fish landings and effort expended. Gear-wise, species-wise, quarter-wise fish landing data from the year 1962 for each maritime state of the country are being populated periodically at the Data Centre of CMFRI. This unique collation of first hand data based on the FAO approved sampling design has been the backbone of many a scientific endeavour carried out by avid fish researchers across the country and other parts of the globe.

Having blazed an illustrious trail for more than six decades, CMFRI has initiated a new system of field information dispensation on a near real time basis. As the first phase of this effort, the raised landing figures and the landing centre price range of important resources of major fishing harbours of the country are being published here. The landing figures (in kg) indicate the quantity of selected resources which were brought to the respective harbours during a 24 hours period starting from 12:00 noon of the first calendar day to 12:00 noon of the subsequent day. These figures are updated at 1600 h every working day on as and where available base. The archive data can be availed for annual averages and relevant information.

Conclusion

Information pertaining to commodities and its details are relevant in a trade setting. In a globalized market of a perishable commodity like fish, updated information on products, markets, infrastructure, quality checks, tariffs, trade barriers and the like will play a crucial role in deciding the commodity flow. Competing in the international food markets requires strenuous quality checks, failing which the chances of rejection and a ban on a commodity are possible. It is imperative to have a comprehensive knowledge on various quality checks adopted and rejection rates in a trade channel and there are databases supporting these causes as mentioned earlier. It is therefore relevant to know the various databases, its role and accessibility while studying international trade. The present study is a humble attempt in studying the different global databases and there tens of hundreds of websites hosting the information corridors which can pave way for solutions encountering different issues in international fish trade. The guidelines provided here further calls upon a detailed study on more databases and compilation of information to benefit the various stakeholders in international fish trade.

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